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|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/534,934             | DECK ET AL.         |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | HUNG Q. DANG           | 2612                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 47,48 and 51-75 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 47,48,51-75 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application  |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                           |

### DETAILED ACTION

1. This communication is in response to the Notice of Panel Decision from Pre-Appeal Brief Review dated 9/28/2010. The prosecution is now reopened.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 47-48 and 51-75 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

**Regarding claim 47**, it is not clearly understood how the claimed structures and steps, as recited, can be used to determine the fill level. As discussed during the telephone interview dated 9/14/2010, the recited limitation “*the measured signal is digitized and subsequently transmitted without signal processing after the A/D conversion, via the transceiver device, to the environmental device, the environmental device being coupled to an analysis unit which converts the measured signal into a measured value*” simply means that an analog signal is transmitted and reflected off the fill level surface. The reflected out-of-phase analog signal is then locally received and converted to a raw digital signal. The digital signal is then transmitted to a remote

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environmental device, where the digital signal is then converted back to the original out-of-phase analog signal. The only information can be derived from the above process is the phase shift value of said analog signal. Therefore, it is not clearly understood how the above structures/steps can be used to determine the fill level.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 47, 48, 51, 53-56, 58, 60-75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sinz et al. U.S. Patent 6,415,660 in view of Michalski et al. U.S. Pub. 2004/0074295.

**Regarding claim 47**, Sinz et al. teaches a fill level sensor unit (abstract), comprising a measured signal receiver (figure 1, unit 10) registering a measured signal (see column 6, lines 19-32); a processor (figure 1, unit 10 is an evaluation circuit which is inherently equipped with a processor) is configured to evaluate the measured signal (see column 1, lines 5-18 and figures 1, 3-5); wherein the sensor is a fill level sensor; and wherein the measured signal receiver transmits and receives one of a radar signal, an ultrasound signal and a guided microwave signal (see column 6, lines 19-32).

However, Sinz et al. does not specifically disclose that **said processor is configured to only assume activating the measured signal receiver, the A/D**

**converter, and the transceiver device** in such a way **that the measured signal is digitized and subsequently transmitted to an environmental device without signal processing after the A/D conversion**, via the transceiver device, to the environmental device, the environmental device being coupled to an analysis unit which converts the measured signal into a measured value.

Michalski et al., in the same field of endeavor, teaches a fill-level sensing unit, wherein the measured signal is transmitted to remote environmental device for evaluation/analysis to determine the fill level.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further provide a remote evaluation device to the system of Sinz et al., as evidenced by Michalski et al., so that the measured signal can be transmitted to a remote location for evaluation of the fill level (see paragraphs [0012], [0026]; units 14 and 15 are at remote location).

Regarding the limitation “**processor is configured to only assume activating the measured signal receiver, the A/D converter, and the transceiver device in such a way that the measured signal is digitized and subsequently transmitted to an environmental device without signal processing after the A/D conversion**”, clearly, if said measured signal is desired to be converted and analyzed at a local location, then all the claimed components such as the A/D converter would be required at the local location where the fill-level sensing unit is located. On the other hand, if said measured signal is desired to be converted and analyzed at a remote location , then the signal processing and the necessary hardware would not be required at the local location and thus the hardware

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of the sensor unit would be preferably kept to the minimal, enough to perform the data transmission; in this case, the minimal hardware requirements would clearly be the measured signal receiver and the transceiver device. Regarding the claimed **wireless** data transmission limitation “..a transceiver device wirelessly transmitting data to an environmental device”, the Examiner gives Official Notice that wireless transmission has been commonly equipped in many telemetry systems. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide wireless transmission to the system taught by Sinz in view of Michalski et al. to wireless perform data communication.

**Regarding claim 48**, the input/output components claimed in claim 48 are implicitly suggested based on the rejection of claim 47 stated above.

**Regarding claim 51**, Sinz et al. also teaches that measured signal is a propagation time signal (see column 1, lines 5-18).

**Regarding claims 54 and 55**, the environmental device taught by Michalski et al. is also coupled to a process control system (see claim 1 of Michalski et al.; unit 14 is a process control system).

The Examiner gives Official Notice that wire/wireless coupling/connecting two devices have been commonly known and equipped in many communication systems. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide wire or wireless coupling or connection between the environmental device and the process control system disclosed by Sinz in view of Michalski et al.

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**Note:** Since the Applicant has not challenged the above given Official Notice, the given Official Notice has now become the Applicant's prior art admission.

See MPEP Par: 2144.03©

if applicant does not traverse the examiner's assertion of official notice or applicant's traverse is not adequate, the examiner should clearly indicate in the next Office action that the common knowledge or well-known in the art statement is taken to be admitted prior art because applicant either failed to traverse the examiner's assertion of official notice or that the traverse was inadequate. If the traverse was inadequate, the examiner should include an explanation as to why it was inadequate.

**Regarding claims 58 and 62**, as mentioned in the rejection of claim 47, Sinz et al. in view of Michalski et al. teaches a sensor unit being wirelessly coupled to an environmental device having a control. Even though, Sinz et al. in view of Michalski et al. does not specifically mention that said environmental device includes a **display**, however, the Examiner gives Official Notice that a display has been commonly provided in many monitor devices for displaying desired data to the user. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further provide a display to the sensor system of Sinz et al. in view of Michalski et al. for displaying desired data. Even though, Sinz et al. in view of Michalski et al. only disclose one environmental device including a control and a display unit, however, it would have been obvious to one of ordinary skill in the art to further provide another environmental device so that the sensed data can be transmitted to another location/user for data processing.

**Regarding claim 64**, as stated in the rejection of claim 62, if the sensed parameter/status data is desired to be transmitted to another environmental device, then, obviously, said sensed parameter/status can also be transmitted to said further environmental device.

**Regarding claim 65**, even though Sinz et al. in view of Michalski et al. does not specifically teach that the analysis unit, a control and display unit are integrated into the environmental device, however, the Examiner gives Official Notice that such electronic components have been commonly integrated together in many electronic devices for the convenience of the operator. Also, the use of a one-piece construction instead of multiple separable pieces structure would be merely a matter of obvious engineering choice in design (see MPEP 2144.04 In re Larson design engineering choice and MPEP 2144.04 changes in size/proportion).

**Regarding claim 66**, even though Sinz et al. in view of Michalski et al. does not specifically mention an interface for a wire-bound data transmission, however, the Examiner gives Official Notice that interfaces for use with wire transmission have been commonly known and equipped in many electronic devices. Therefore, by conventionality, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an interface for wire-bound data transmission to the sensor unit disclosed by Sinz et al. in view of Michalski et al.

**Regarding claims 53, 56 and 61**, the Examiner gives Official Notice that bidirectional communication between any two devices has been conventionally equipped in many control/communication systems for data transmission or control operations. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide bidirectional communications between any of the two devices disclosed by Sinz et al. and Michalski et al.

**Note:** Since the Applicant has not challenged the above given Official Notice, the given Official Notice has now become the Applicant's prior art admission.

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See MPEP Par: 2144.03©

if applicant does not traverse the examiner's assertion of official notice or applicant's traverse is not adequate, the examiner should clearly indicate in the next Office action that the common knowledge or well-known in the art statement is taken to be admitted prior art because applicant either failed to traverse the examiner's assertion of official notice or that the traverse was inadequate. If the traverse was inadequate, the examiner should include an explanation as to why it was inadequate.

**Regarding claim 63**, see the rejection of claim 52.

**Regarding claims 67 and 69**, see the rejection of claim 47. Even though, Sinz et al. in view of Michalski et al. does not specifically disclose a **plurality** of sensor units, however, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a plurality of sensor units (similar as the sensor unit claimed in claim 47) to the system disclosed Sinz et al. in view of Michalski et al. so that a plurality of different parameters can be sensed and transmitted to a remote location for processing.

**Regarding claim 68**, see the rejection of claim 58.

**Regarding claims 70, 72 and 74**, (isn't every control task is assumed by some sort of processor or controller?) Sinz et al. in view of Michalski et al. also teaches a processor (figure 1, unit 10) which inherently and exclusively assume control task. Regarding the claimed "plurality of sensor units"; clearly, if the fill levels in a plurality of containers are to be measured, then a corresponding plurality of sensor units would be employed to perform such task.

**Regarding claim 71**, Sinz et al. in view of Michalski et al. inherently teaches a memory arrangement coupled to the processor and storing parameters. (processors are inherently equipped with memories for data manipulation). Even though, Sinz et al. in view of Michalski et al. does not specifically teach calibration data for controlling a measurement sequence, however, one of ordinary skill in the art would recognize that



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calibration data has been commonly applied in many measurement systems in increase accuracy. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further provide calibration data to the sensor unit of Sinz et al. in view of Michalski et al. in order to increase accuracy in data measurements.

**Regarding claim 73**, see the rejection of claim 71. Regarding the claimed “plurality of sensor units”; clearly, if the fill levels in a plurality of containers are to be measured, then a corresponding plurality of sensor units would be employed to perform such task.

**Regarding claim 75**, see the rejection of claim 71.

8. Claims 52, 57 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sinz et al. U.S. Patent 6,415,660 in view of Michalski et al. U.S. Pub. 2004/0074295 and further in view of Soliman U.S. Pub 2003/0174067.

**Regarding claim 52**, Sinz et al. in view of Michalski et al. teaches the sensor unit of claim 47. However, Sinz et al. in view of Michalski et al. does not specifically teach the wireless transmission of the data between the sensor unit and the environmental device using WLAN.

Soliman, in the same field of endeavor, discloses a wireless telemetry network, wherein a WLAN is employed between device-device transmission.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide WLAN for wireless transmission between the sensor unit and the environmental device disclosed by Sinz et al. in view of Michalski et

al., as evidenced by Soliman, so that sensed data can be wirelessly transmitted to said environmental device.

**Regarding claims 57 and 59**, Sinz et al. in view of Michalski et al. teaches the sensor unit of claim 58. However, Sinz et al. in view of Michalski et al. does not teach said environmental device being a mobile device.

Soliman, in the same field of endeavor, teaches a wireless environmental telemetry network, wherein the environmental device is a mobile device (Figure 1, unit 140) so that said mobile device can be carried around.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the environmental device disclosed by Sinz et al. in view of Michalski et al. to be a mobile device, as evidenced by Soliman, so that said environmental device can be carried around by the operator.

### **Conclusion**

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG Q. DANG whose telephone number is (571)272-3069. The examiner can normally be reached on 9:30AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Zimmerman can be reached on (571) 272-3059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hung Q Dang/

Examiner, Art Unit 2612

4/7/201

/Timothy Edwards, Jr./

Primary Examiner, Art Unit 2612